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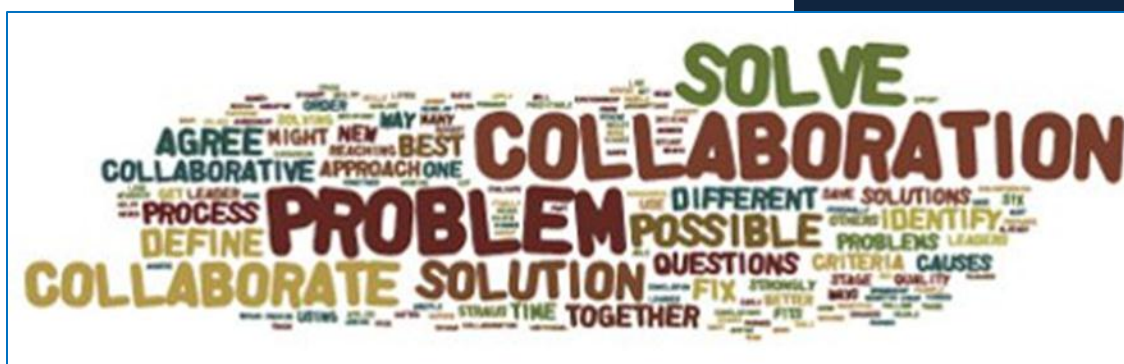
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Supporting Positive School Culture Through Interpersonal Engagement



PHASE ONE REPORT MINDARIE SENIOR COLLEGE April 2016



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Project Summary

The Industry Collaboration Project, 'Supporting Positive School Culture Through Interpersonal Engagement' is a joint project between Edith Cowan University, Hampton Senior High School, Kinross College and Mindarie Senior College. The project aims to empower school leaders to co-create, implement and evaluate professional learning programs that promote enhanced staff relationships. Supporting school leaders to improve staff relationships is important because staff (both teaching and school support) are key stakeholders in children's educational outcomes (Stringer, 2013). Ensuring school staff feel valued in their school community is also of ongoing importance, particularly as staff accountability and burnout rises in the teaching profession both within Australia and internationally (Gurd, 2013; Sterrett & Irizarry, 2015).

The project has two phases. Phase One included collecting and analysing baseline data across the three participant schools, as each school presents a different context, school community and organisational structure. This report outlines the findings from Phase One and the recommendations for the school based on these data.

Phase Two is the 'action' stage of the research project. In this phase, the researchers will work with each school's leadership team to decide on one or two key areas for improvement in the school staff culture. The areas for improvement will undergo some changes in Terms One and Two of 2016, and data will be collected in the middle of 2016 to determine if the changes resulted in any improvement for the school staff and culture. Any changes will be co-led by the school and the researchers, with the emphasis being on creating sustainable practices that enhance the school community. It is anticipated that a cross-case analysis of the three schools' data will result in a list of key principles that are important to fostering a positive staff culture.

The uniqueness of the three case study schools involved provides an opportunity to explore school culture and relationships in diverse contexts, strengthening the generalisability of key principles developed, while also recognising school differences linked to other factors in school organisations.

Project Methodology

This project is guided by four research questions, investigated through participatory action research. The research questions being investigated are:

1. How can researchers and school leadership staff work collaboratively to sustain positive school communities?
2. What factors affect the development of positive staff relationship opportunities within their school context?
3. Does the development of positive staff relationship opportunities improve a sense school culture and community over time?
4. Does enhancing positive staff relationships increase teacher self-efficacy?

These questions are centred on both the process of collaboration between researchers and schools, and the school staff culture within each school. The inclusion of a collaborative approach between researchers and school leadership to effect change is crucial to the success of this project, as the importance of leadership staff in developing a positive school culture is frequently cited in the literature (Hoff Minckler, 2013; Mascall, Leithwood, Straus, & Sacks, 2008; Sterrett & Irizarry, 2015; Stringer, 2013).

Participatory Action Research

Participatory action research (PAR) “has a social and community orientation and an emphasis on research that contributes to emancipation or change in our society” (Creswell, 2014, p. 614). PAR goes beyond the traditional notion of action research, in which research is often limited to individual teachers solving classroom problems or small groups working to solve an internal issue within a school (Creswell, 2014). Instead PAR engages a community-based approach to solving problems or making changes within an organisation (Creswell, 2014; Kindon, Pain, & Kesby, 2007). This research project uses PAR as it involves the whole school staff community giving feedback to the school organisation and any changes made within the school. Instead of researchers giving recommendations from the perspective of an ‘independent outsider’, this research seeks to engage researchers and school staff in meaningful collaboration. Therefore, the approach supports active participation from the school to create sustainable change that is driven from within the school itself.

Two primary sources of data were collected to establish the baseline of school staff culture in each case study school. First, quantitative data were collected through two online surveys (one completed by all non-teaching and teaching staff, and an additional survey for teaching staff). Second, leadership, teaching and school support staff participated in qualitative focus groups to further explain the areas evaluated by the whole school survey. Specific details of these data collection methods are outlined in the subsequent sections of this report.

Quantitative Evaluation of Current School Culture

Two online surveys were administered at Mindarie Senior College in Term 4, 2015. All staff were invited to participate in the surveys. The whole school survey was based on the School Organisational Health Questionnaire, established by the University of Melbourne (Hart, Wearing, Conn, Carter, & Dingle, 2000). This survey measures staff morale and 11 factors that affect morale:

1. Appraisal and recognition;
2. Curriculum coordination;
3. Effective discipline policy;
4. Excessive work demands;
5. Goal congruence;
6. Participative decision making;
7. Professional growth;
8. Professional interaction;
9. Role clarity;
10. Student orientation, and
11. Supportive leadership (Hart et al., 2000).

The researchers also hypothesised that staff culture will affect teachers' efficacy to teach, as goal congruence, collaboration and quality of interactions with other staff members have been shown to increase self-efficacy (Devos, Dupriez, & Paquay, 2012; Kelm & McIntosh, 2012). Therefore, the teaching staff were also invited to complete a teacher self-efficacy survey based on the Science Teaching Efficacy Belief Instrument (Riggs & Enochs, 1989). This survey was generalised so that it was applicable for all teachers; subsequently, the word 'science' was replaced with 'my subject area' throughout the questionnaire. Different subject versions of Science Teaching Efficacy Belief Instrument (Riggs & Enochs, 1989) have been validated since the original publication (Enochs, Smith, & Huinker, 2000; Roberts & Henson, 2000); however, a generalised version of the questionnaire has not yet been created. This research will determine the validity and reliability of the measurement, as well as report any significant correlation between teacher efficacy and school staff culture.

Qualitative Evaluation Using Focus Groups

After the survey data were collected, focus groups were conducted with:

1. The leadership team;
2. Teaching staff, and
3. School support staff.

Participants in these focus groups were self-selecting, having registered an expression of interest when invited to complete the survey component of the project. The leadership team focus group was conducted on the school grounds, as this team were leading the

project in the school and had agreed to confidentiality ethics requirements. The teaching staff and school support staff were taken off school grounds for their focus groups, as these staff were assured anonymity due to the sensitive nature of school culture discussion and adherence to ethics requirements, as per the National Statement on Ethical Conduct in Human Research (National Health and Medical Research Council, The Australian Research Council, & The Australian Vice-Chancellors' Committee, 2007).

Each focus group interview was audio recorded and then transcribed by an independent organisation. The researchers conducted a thematic analysis of the transcripts, combining the data for all three focus groups, until a schema of common themes emerged from the data.

Phase One Findings

The Phase One findings represent the baseline data that will be used to determine any action to be taken in the school. The presentation of the quantitative findings are organised by the participant demographic information, then the factors measured in the School Organisational Health Questionnaire (Hart et al., 2000) that proved reliable in this sample, and lastly, the initial indications of teacher efficacy from the Teaching Efficacy Belief Instrument. The qualitative data were used to expand on and explain the findings from the School Organisational Health Questionnaire and, therefore, the qualitative thematic analysis is presented alongside each scale of the questionnaire.

Participant Demographic Information

A total of 55% of the College staff completed the whole school questionnaire. We acknowledge that the sample size was likely due to the end of year timing of data collection and the voluntary nature of the research process. Within the sample, 24% identified themselves as leadership staff, 56% identified as teaching staff, and 20% identified as being College support staff. The highest completion rate was attributed to leadership staff; however, the College support staff members are slightly underrepresented in the sample, with only 40% of these staff members invited electing to complete the research questionnaire.

Overall, 66% of participants identified themselves as female, and 32% identified as male. The remaining staff members did not wish to disclose their gender. A range of age groups was represented in this questionnaire sample, as shown in Figure 1 (overleaf).

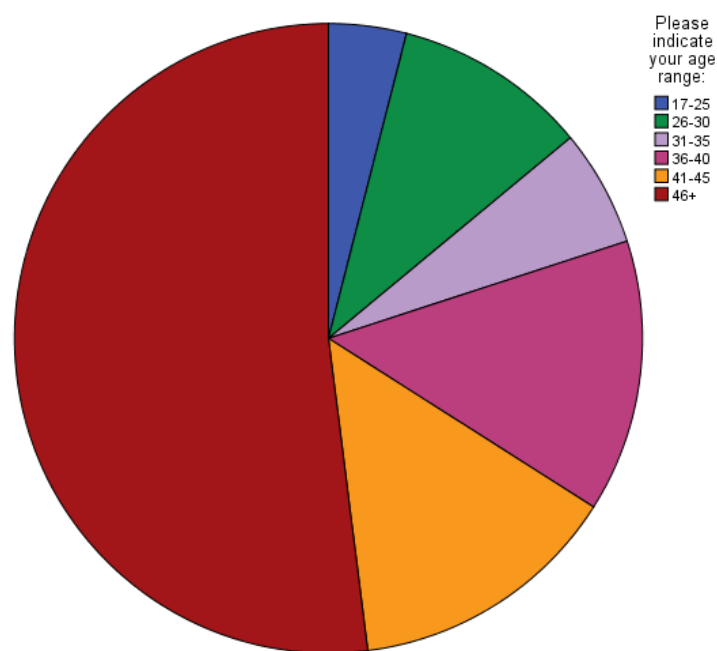


Figure 1. Pie chart showing breakdown of staff age ranges for pre-test School Organisational Health Questionnaire.

The majority of the sample identified as 46+ years of age, with the 36-40 and 41-45 years groups also well represented. Collectively, these groups account for 80% of the questionnaire sample. Only 4% of the sample identified as being between 17 and 25 years of age. The 26-30 years category represented 10% of staff, while the 31-35 years category was selected by 6% of staff.

School Organisational Health Questionnaire

The School Organisational Health Questionnaire (SOHQ) measures morale and 11 indicators of morale in the school culture (Hart et al., 2000). The data collected from the whole College staff were initially analysed for normality of distribution and reliability. Any items that were negatively worded (e.g., There is no time for teachers to relax in this College) were reverse coded, so that a higher score indicated a higher level of school health and positive morale. Of the 12 scales (morale and the remaining 11 factors), nine returned reliability scores ($\alpha < .70$) that allowed for further analyses to be conducted.

Subsequently, the following factors originally included in the analyses for this sample:

1. Morale ($\alpha = .87$);
2. Appraisal and recognition ($\alpha = .93$);
3. Excessive work demands ($\alpha = .86$);
4. Goal congruence ($\alpha = .74$);
5. Professional growth ($\alpha = .86$);

6. Professional interaction ($\alpha = .80$);
7. Student orientation ($\alpha = .84$), and
8. Supportive leadership ($\alpha = .90$).

Each of these eight scales were measured through either four or five items. The quantitative data presented below are based on scaled aggregated scores so that all of the scales are comparable.

Although the School Organisational Health Questionnaire (SOHQ) is a validated instrument, the researchers felt that the unique context of Mindarie Senior College could change the way in which the instrument measured school health, as the College does not follow the 'typical' year 7 to 12 school context in which the instrument was developed. Subsequently, the researchers chose to compute exploratory factor analyses to investigate the underlying structure to these data. Interestingly, the exploratory factor analysis revealed that morale and student orientation were not being measured in the same way as the original SOHQ. In this sample, a new scale of morale (which we have termed collegiality) was measured by the items:

1. *I receive support from my colleagues* (originally professional interaction);
2. *Teachers in this College can rely on their colleagues for support when required* (originally professional interaction);
3. *There is good team spirit in this College* (originally morale), and
4. *There are forums in this College where I can express my views or opinions* (originally participative decision making).

These items were further analysed for cohesiveness, and returned a Cronbach's alpha coefficient of 0.79. Tukey's test of nonadditivity, which determines if a scale is unidimensional, also showed collegiality as a reliable construct.

The second scale that differed from the SOHQ was student orientation. This scale still included many of the original items that were retained; however, some of the original morale items also loaded onto this factor. Subsequently, the new scale was termed 'shared vision', as this term also is consistent with the College's approach to education. Shared vision was measured by the items:

1. *There is a lot of energy in this College* (originally morale);
2. *This College promotes the concept of students being individuals* (originally student orientation);
3. *Students are treated as responsible people in this College* (originally student orientation), and
4. *Students in this College are encouraged to experience success* (originally student orientation).

Again, these items were analysed for reliability. Cronbach's alpha coefficient for the new shared vision scale was 0.88 and Tukey's test for nonadditivity confirmed the construct as reliable.

As a result of the exploratory factor analyses the following scales were retained:

1. Collegiality (new scale);
2. Shared vision (new scale);
3. Appraisal and recognition;
4. Professional growth, and
5. Supportive leadership.

Excessive work demands and goal congruence, although measuring reliably, were removed as their item loadings were too small ($< .40$) and, therefore, suggested that these factors were not critical to the model of school organisation health within this sample. Professional interaction was also removed as two of its items were included in the new collegiality scale, and the remaining items did not load highly onto professional interaction as a discrete factor.

Confirmatory factor analyses were computed for the five scales retained after the exploratory phase of data analysis. The confirmatory factor analyses were used to build a model for how these factors were interacting with each other based on correlations calculated using Spearman's *rho* (due to the nonparametric distribution of the data). A number of path diagram models were constructed for the five factors.

Figure 2, overleaf, shows the best-fit path diagram for these data. The model constructed returned very positive fit statistics, despite the limitation of the small sample size. The current model returned excellent goodness-of-fit statistics, CFI = .999, TLI = .998 and $\chi^2/df = 1.022$. The Root Mean Square Error of Approximation, which measures 'badness' of fit, also indicated the good fit of this model (.021). This was confirmed by the Standardised Root Mean Square Residual, which was .055. The final model shows the best fit for these data and displays the statistical interactions between the factors from the School Organisational Health Questionnaire specific to the Mindarie Senior College context.

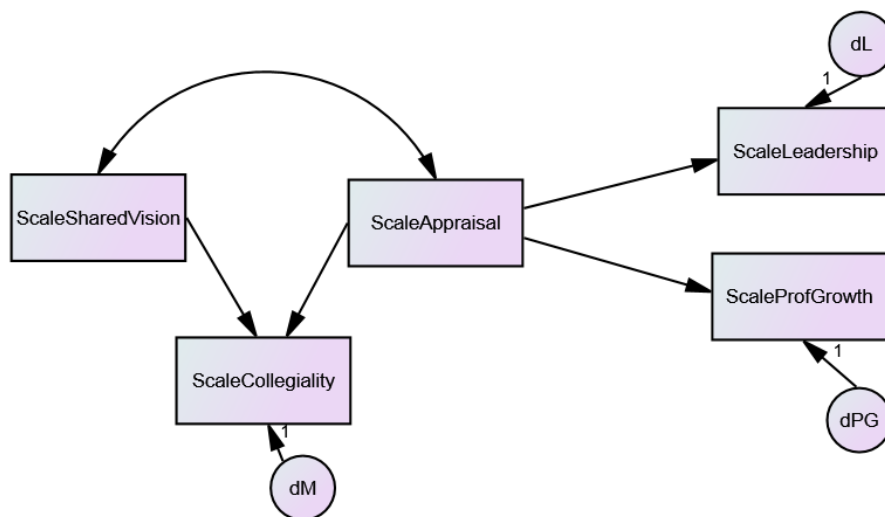


Figure 2. Path diagram of related factors from the School Organisational Health Questionnaire. Note: ‘Scale’ denotes that the weighted scale variables were used in the construction of the model. SharedVision = Shared Vision, Appraisal = Appraisal and Recognition, Leadership = Supportive Leadership, Collegiality = Collegiality, ProfGrowth = Professional Growth, d = delta (variance of each factor)

Figure 2 shows the pathways connecting the factors in the model. The direction of the arrows indicate the regression pathway, or the effect, of one factor on the other factor/s in the model. Table 1, below, shows the regression weights, which ranged from a small-medium effect ($r < .2$) to a large effect ($r < .5$) for the pathways. However, it is important to note that the label of medium or large effect size is an interpretive indication rather than “as iron-clad criteria without reference to the measurements taken, the study design, or the practical or clinical importance of the findings” (Durlack, 2009, p. 922). Nevertheless, the effect sizes displayed in this model have construct validity to the original questionnaire and within the educational context (Hart et al., 2000; Hoff Minckler, 2013; Sterrett & Irizarry, 2015; Stringer, 2013; Watterston & Caldwell, 2011).

Table 1. Regression weight estimates for Mindarie Senior College pre-test model.

Pathway			Regression Weight	Standard Error	Significance Level
Supportive Leadership	<---	Appraisal and Recognition	.594	.114	***
Professional Growth	<---	Appraisal and Recognition	.613	.119	***
Collegiality	<---	Shared Vision	.282	.113	.012
Collegiality	<---	Appraisal and Recognition	.409	.079	***

*** denotes significance at the 0.001 level (two-tailed).

Shared Vision

The shared vision scale included the following items:

1. There is a lot of energy in this College;
2. This College promotes the concept of students being individuals;
3. Students are treated as responsible people in this College, and
4. Students in this College are encouraged to experience success.

The aggregated data show that most staff responded very positively to the construct of a shared vision, which encompassed the core College priority of preparing “Students to become young adults who are confident about taking their place in the world and will be active citizens who positively contribute to a sustainable future” (Mindarie Senior College, Priorities 2013-2016). Most of the statements within shared vision related the concept of students as citizens and the College’s philosophies of student engagement with their learning. A total of 89.8% of staff members agreed or strongly agreed with the statements in this questionnaire scale. The remaining 6.1% had an aggregated score that equated to selecting ‘neither agree nor disagree’ to the shared vision statements, while 4.1% disagreed with the statements overall. A crosstabulation indicated that the 4.1% of staff members whose responses corresponded with the ‘disagree’ selection identified themselves as teaching staff members. The item ‘Students in this College are encouraged to experience success’ was the most agreed with statement, having a mean score of 4.44 ($SD = .54$). The item in this scale with the lowest agreement was ‘Students are treated as responsible people in this College’ ($M = 4.16$, $SD = .93$); however, there was little difference in the means of all statements within this scale.

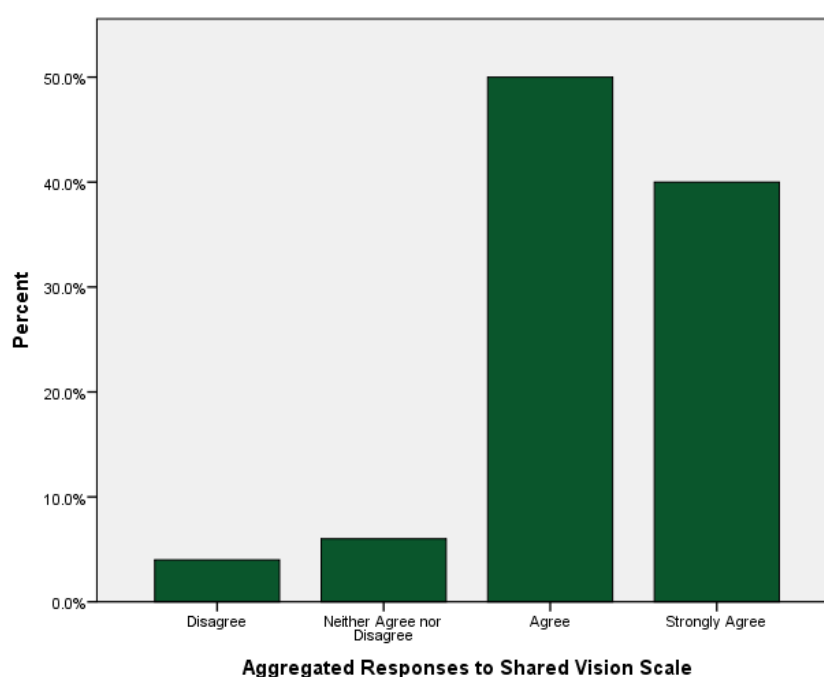


Figure 3. Staff members aggregated responses to the items in the Shared Vision scale.

The focus group feedback suggested that the unique senior college context had a significant impact on shared vision: “The young adult ethos is a big part of the culture that separates us ... from most other schools”. The consensus among all of the focus groups was that the College is well regarded due to the vision it promotes among its staff members and the broader community:

It's a school of choice ... [and that notion] permeates the whole culture of the college, I think, because the kids when they arrive are happy to be here and feel as if they've got something that other kids don't.

Much of the focus group discussion was centred on the student orientation of the College, as “from the very first interview ... everything's directed at the student. They've got to take responsibility for their own learning.” Some of the participants saw the unique senior college context as providing “a fresh start for our students.”

Other participants spoke about how the College staff members uphold the vision due to their involvement in its creation. A key aspect that appeared to make the shared vision response so positive was that:

It was the staff members initially who came up with the mission and values. Certainly the ones [values] that we've got at the moment, and I know that they're going to be reviewed in the future.

The focus group participants all included statements about how the students themselves are integral in constructing the vision of the College. One focus group reflected on the experience of develop the College's missions and values, stating “even the students and the parents were involved in the process.”

A key outcome of having the shared vision was the consensus among staff members that meant “the kids ... [are] not as prone to try and buck the system because they're going to get the same reaction from every level of staff.” The focus group participants noted the role of leadership staff members in ensuring that the shared vision of the College was upheld: for example, through the consistent application of College policies. One participant stated that every year senior staff members will “go through the policy with new staff members ... spend time with each of them and give them the policy. All that groundwork that needs to be done.” This level of consistency in applying College policies, aligned to the shared vision, improved the staff morale and sense of professional support in the College. One participant stated: “It's a professional environment ... I've not worked in a place where the expectations are high and people work to those expectations.”

Appraisal and Recognition

The appraisal and recognition scale included the following items:

1. I am regularly given feedback on how I am performing in my role;
2. I am happy with the quality of feedback I receive on my work performance;
3. There is a structure and ongoing process that provides feedback on my work performance;
4. I have the opportunity to discuss and receive feedback on my work performance, and
5. Teachers receive recognition for good work.

The aggregated data show that 62% of staff members agreed or strongly agreed with the statements in this scale. Compared to the shared vision scale, there was a higher percentage of staff members who generally selected 'neither agree nor disagree' when responding to the statements. While the median score across all items in the appraisal and recognition scale was the same ($Mdn = 4$), the item 'I have the opportunity to discuss and receive feedback on my work performance' had the highest mean score ($M = 3.90$, $SD = .79$). Only 6% of teachers disagreed with this item, 9% (across all three job roles of leadership, College support and teaching staff members) chose to neither agree nor disagree, and the remaining staff members all selected positive response categories.

The lowest mean score in this scale was for the item 'I am regularly given feedback on how I am performing in my role' ($M = 3.42$, $SD = .99$), for which 54% of staff members selected the 'agree' or 'strongly agree' categories. The remaining 46% of staff members responses were divided between the other three categories, with 4% strongly disagreeing to the statement on regular feedback, 14% selecting 'disagree' and 28% of staff members opting to 'neither agree nor disagree' with this item. A crosstabulation indicated that the teaching staff members had the most frequent responses in the lower categories, although some College support staff members also disagreed with the item.

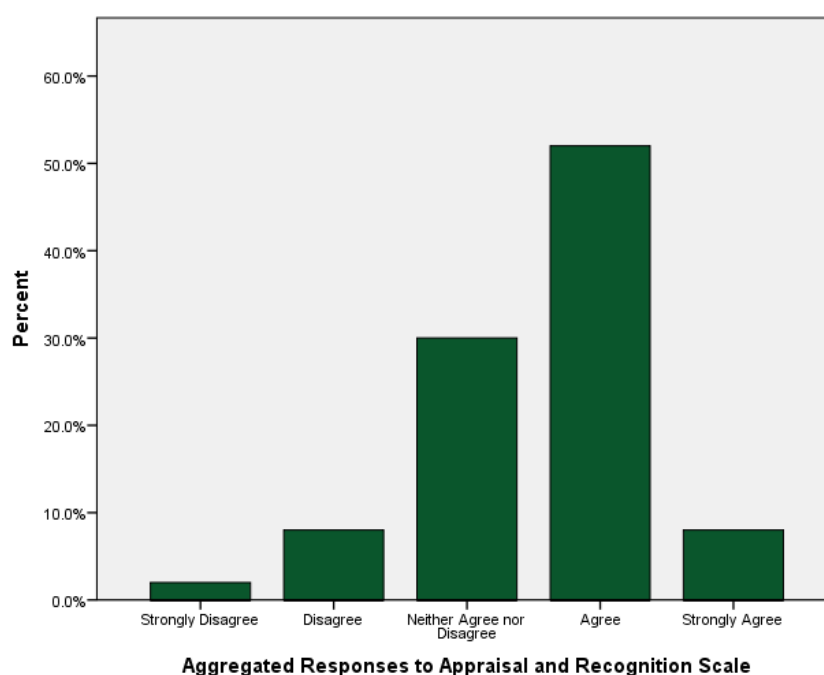


Figure 4. Staff members aggregated responses to the items in the Appraisal and Recognition scale of the SOHQ.

The focus group feedback suggested that all staff members recognised the effort that goes into acknowledging members of staff for work performance. The Wednesday forum was cited across all three focus groups as the key event where recognition is given to staff members. One participant noted that “there's a weekly acknowledgement that's done through leadership and then shared with staff at our forum ... There are group emails and we have a champagne award where staff can nominate other staff for positive work.” All of the focus groups also stated that emails were frequently sent to the whole College staff members to acknowledge positive work; however, some groups also explained that sometimes the positive message was lost in the sheer volume of emails they were receiving. One participant stated: “It is email and email and email. Way too much!” The emails that were important to staff members were those from parents and the community. Participants explained how “if a parent has written a little letter often one member of staff will pick it up and say everyone should read this, this person has done really well.” Other ways in which staff members felt they gained recognition was through the College newsletter and announcements, or at College assemblies.

While all of the focus group participants knew about the ways in which staff members were recognised, various focus groups highlighted that part-time staff members who do not work on Wednesdays may miss out on the recognition that occurs at events like the forum and department meetings. This also impacted staff appraisal, as these staff members may not have a common time during which to meet and reflect on their own work, as well as what is happening within the wider department or team of staff. For the other College staff members, appraisal was a fairly formal process at the beginning and end of year. It was evident that appraisal occurs formally at all levels of the College, from individual teaching

results to broader department information where leadership staff members discuss how “[subject] results are going and anything [staff] have implemented in terms of different teaching strategies and reflect upon its success.” The College focus group participants also reflected on their involvement in student surveys and using student feedback as a source of material for reflection and appraisal:

We do student-based surveys, which look at all the elements of what students are getting in class next to what they [would] prefer to get. So virtually all our teachers now have gone through that process and get great feedback and it's a pre-post test situation.

The inclusion of student feedback into appraisal demonstrated the integration of the College’s shared vision into their daily practices and professional learning as staff members.

Collegiality

The collegiality scale included the following items:

1. I receive support from my colleagues;
2. Teachers in this College can rely on their colleagues for support when required;
3. There is good team spirit in this College, and
4. There are forums in this College where I can express my views or opinions.

Overall, collegiality at the College is high. In the aggregated data a total of 90% of the participating staff members selected ‘agree’ (60%) or ‘strongly agree’ (30%) when responding to the items in the collegiality scale. The most positive response was for the item ‘Teachers in this College can rely on their colleagues for support when required’, which had a mean score of 4.47 ($SD = .79$) and a median score of 5.00. The positive response to this item was supported across all three participant groups, with both College support and leadership staff members acknowledging the collegial support teachers provide for one another in the College.

The lowest mean response to an item in this scale was ‘There are forums in this College where I can express my views or opinions’, with a mean of 4.14 ($SD = .76$). On further investigation, it was mostly staff members who identified as being College support staff who felt they did not have an opportunity to participate in College forums. A small percentage (6%) of teaching staff members neither agreed nor disagreed with the statement about College forum participation, while the remaining teaching staff members and all of the leadership team selected response categories that indicated they did feel they have an opportunity to express their views through College forums.

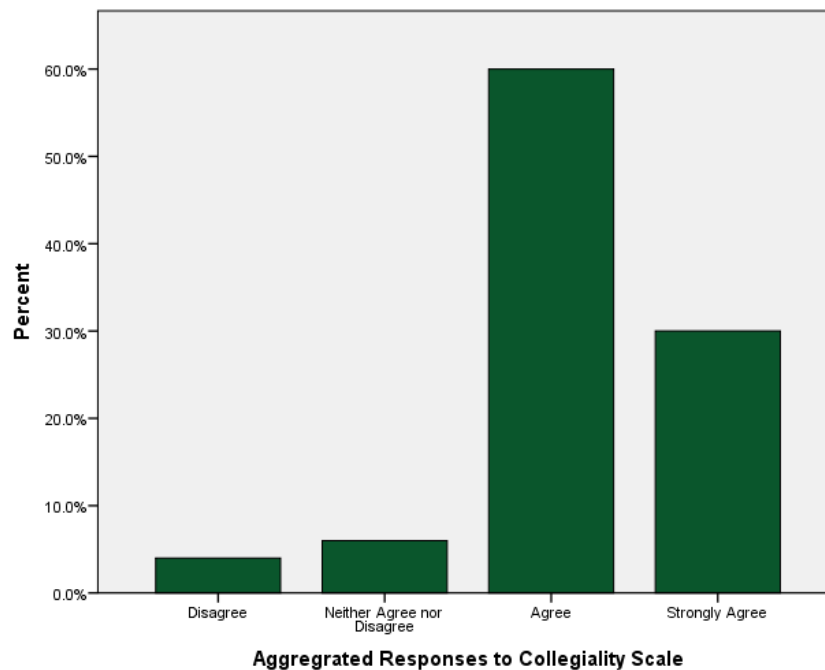


Figure 5. Staff members aggregated responses to the items in the Collegiality scale.

The focus group data supported the very high mean scores for this scale. All three focus groups discussed the positive relationships among the College staff members, stating examples such as:

They all enjoy each other's company at work and they have friendships outside of work. So, yes. But it is interesting when a colleague left, she spoke about the fact that she doesn't talk about coming to work, she talks about going to school.

The sense of “going to school” not “going to work” was symbolic of the positive interactions and collegiality of the staff members. Collaboration was one way in which collegiality was demonstrated in the College. Staff members reflected on how “[the College is] very team oriented. The school community ... students and the greater community ... are quite cohesive and work very well together as a team. [We are a] higher achieving staff.” As a Senior College, much of the collaboration and collegiality discussion in the focus groups was centred on subject-specific content; however, the focus groups also cited Wednesdays as a professional learning day. One example was the broader whole-College initiatives:

[We have been discussing] *cooperative learning* or the *thinking made visible* ... the latest big discussion that we've had is to do with our mentor system. It's been overhauled and so we've used Wednesdays or professional learning days in order to talk to other learning areas and groups of people, admin and that sort of thing ... that's probably the biggest amount of collaboration that we have.

As with the appraisal and recognition scale, conducting these sessions on Wednesdays meant that part-time employed staff members were not a part of the discussion and collaboration within the College.

One aspect of collegiality that some participants felt could be improved is the “insular” nature of the College. One participant reflected:

[I think] staff morale is great. Everyone seems to be happy to ... work hard. But it's very insular. I know people that have worked there for a few years that haven't seen the other side of the school ... interaction between staff is largely within learning areas.

Some systems worked as an intermediary between learning areas; specifically computer network systems like SEQTA, where staff members from different learning areas could access the same student records about attendance and any commendations/concerns noted by other teachers. While SEQTA supports collegiality through the maintenance of a shared platforms for records and communication, the focus group staff members suggested that “it would be nice to have a central [staffroom] where you could go, even if you didn't know the people that were there. That's the only way you get to know them.” This was a solution that they saw could avoid isolation, as one participant shared:

It's quite isolating sometimes being a new teacher because the only people you're getting to know - unless you're joining groups and all that sort of stuff - is within your department. So we do have an opportunity on Wednesdays where for morning tea the staff mix, but a lot of the part-timers aren't there that day so there are a lot of people absent. Yeah, I think not having that common area - there never has been one. It sort of keeps people a little bit in their departments and a little bit isolated.

The discussion of a shared staffroom often started from the idea that “our staff actually like one another.” Staff were often social, and at the beginning of the year “dedicate two, three hours on one of those [staff only] days to collegial activities where they'll go in the gym or ... we've gone kayaking, surfing, walking, now we do games in the gym.” The biggest barrier to staff participation in these events was family commitments, and some participants spoke about having a variety of activities that are both staff-only and staff members and families, which could be a solution to involving a greater proportion of the staff members in social events.

Professional Growth

The professional growth scale included the following items:

1. Others at this College take an active interest in my career development and professional growth;
2. I am encouraged to pursue further professional development;
3. The professional development planning in the College takes into account my individual needs and interests, and
4. There are opportunities at this College for developing new skills.

Compared to the previous scales, professional growth had a larger range of responses from the participating staff. Overall, 38% of staff members agreed with the items in the scale; however, the frequency of responses in the 'neither agree nor disagree' category was also high (34%). The item recording the highest mean score was 'There are opportunities at this College for developing new skills' ($M = 3.82$, $SD = .92$). Of the three participant groups, College support staff members had the most polarised response to this item, with 50% of this response group indicating 'agree' to the statement and 30% selecting 'disagree'. The remaining 20% selected the 'unsure/I don't know' option in response to the statement about opportunities to develop new skills. The majority of teaching staff members selected positive responses (68% selected 'agree' and 11% 'strongly agree'). The remaining 21% selected lower response categories, although the majority of these responses (14%) were in the 'neither agree nor disagree' category.

The item that scored lowest in this scale was 'The professional development planning in the College takes into account my individual needs and interests'. The mean score for this item was 3.12 ($SD = 1.02$); however, the lowest mode score for this item was 2.00. A total of 36% of participants responded with 'strongly disagree' or 'disagree' to the item about professional development planning, while 26% neither agreed nor disagreed and 40% agreed or strongly agreed. Participants from all three groups had a large variance in their responses, from 'disagree' to 'strongly agree' in leadership and College support groups, and across all five response categories for teaching staff members. Overall, College support staff members had the lowest response to the item (50% disagreed), closely followed by the teaching staff members (36% strongly disagreed or disagreed). However, it is important to acknowledge that these views represented 36% of the total response to this item.

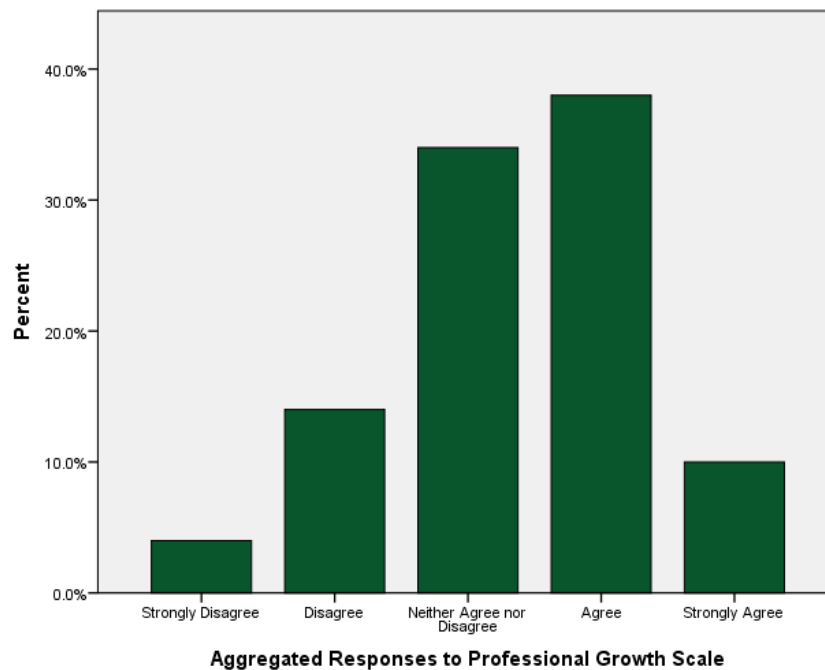


Figure 6. Staff members aggregated responses to the items in the Professional Growth scale of the SOHQ.

Professional growth was a key topic of the focus groups, with staff participants discussing both professional advancement and professional learning. In terms of advancement, all of the focus groups acknowledged that:

Professional advancement ... reduces our retention, because our staff members get promotion. I think the other thing is we have a team here who closely supports staff members who want to get their 'Level Three' classroom teacher status.

The core group of staff members with their Level Three status was seen as a way of being internally recognised as a valued teacher. There was also support for teachers mentoring other teachers to receive this type of professional recognition, and to advance beginning teachers. One participant stated:

Management ... [is the focus to] progress to Level Three, so I think we've got really good opportunities especially for young teachers as well to step right up and be at that higher level quickly.

Professional learning was generally seen as encouraged, and the leadership team stated that "we're always encouraging staff to learn ... We try and provide leadership opportunities for our staff." The key issue with granting professional learning was relief cover for classes. Staff members generally explained that they try to support this by "[applying for professional learning courses] it when it doesn't affect relief. So during exams, during the last ... time slots when we don't have to supply a relief teacher." One participant loosely explained the process of applying for professional learning courses within the College:

You go to your manager ... “I'd like to go to this course” and the manager [says], go and see the Principal ... and then she decides. If it's a yes, then she says, “Who's going to pay for the relief?” ... I think it comes out of my learning area budget.

Some staff members stated that the other key issue with granting professional learning was teachers' reluctance to leave their classes, particularly due to the high-stakes nature of the Senior College environment. However, all professional learning was encouraged, with all focus groups acknowledging that “we can access professional development outside of the school. So we can actually apply for time and money to go and do that. We are encouraged to take any opportunities.” Beyond individual opportunities, whole-College professional learning is also supplied. Whole-College approaches discussed by the focus groups included “a big focus on cooperative learning ... [where] the different learning areas were intermixed. The next one that we've been doing is that *thinking made visible*.” The only constructive criticism of professional learning from the focus group staff members was the amount of time and focus on the new curriculum. This was not directed at the College specifically, but involved the College accessing professional learning from external organisations, such as the Western Australian School Curriculum and Standards Authority, to speak with staff members about the changes to their senior school curriculum areas.

Supportive Leadership

The supportive leadership scale included the following items:

1. There is support from the Executive team in this College;
2. There is good communication between teachers, school support and leadership in this College;
3. The leadership team in this College can be relied upon when things get tough, and
4. I am able to approach the Executive team in this College to discuss concerns I have.

There was agreement that the leadership at the College is supportive, evidenced by an aggregated mean score of 4.06 ($SD = .83$) in which 76% of participating staff members agreed or strongly agreed overall to the statements. All of the items in this scale had a median score of 4.00, indicating the consistently positive responses to the statements about supportive leadership. The most positive response to an item in this scale was for ‘The leadership team in this College can be relied upon when things get tough’. This item had a mean score of 4.16 ($SD = .82$). The only participant group who selected ‘strongly disagree’ or ‘disagree’ responses for this item were the teaching staff members (11%), with the remaining 89% of teachers selecting higher (more positive) response categories.

The lowest response in this scale was for the item ‘I am able to approach the Executive team in this College to discuss concerns I have’, although this item also had a greater variance in the participant responses ($M = 3.92$, $SD = 1.03$). The majority of staff members still responded positively to the item (52% ‘agree’ and 28% ‘strongly agree’), while 4% of staff

members strongly disagreed with the item and 8% disagreed. The College support staff members group had the highest percentage of 'disagree' and 'strongly disagree' responses (30% of their group), followed by the teaching staff members (11% of their group). The remaining responses were in the 'agree' or 'strongly agree' categories, with the exception of 14% of teachers who selected 'neither agree nor disagree' in response to the item about approaching the Executive team about their concerns.

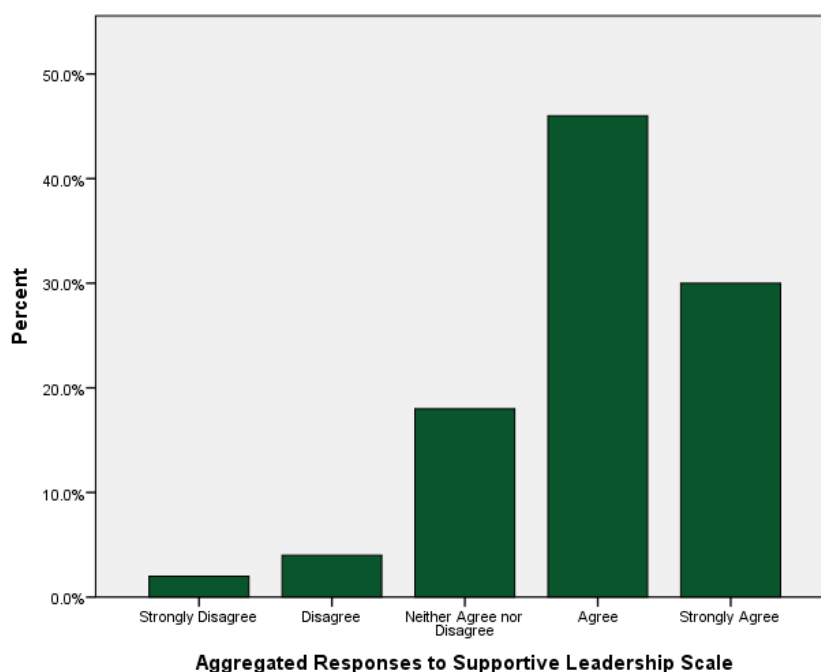


Figure 7. Staff members aggregated responses to the items in the Supportive Leadership scale of the SOHQ.

The focus groups spoke highly about leadership at the College. The staff participants noted that “[leadership] get involved in anything! On our professional learning day ... action learning groups were showcasing what they'd done [and] leadership were there and taking an interest in what everybody had done.” This vignette was typical of the modelling that the leadership team promoted, evidenced across all of the focus groups. Leadership, across all the levels of the College, was seen as particularly important due to the high-stakes nature of senior school courses. One participant explained:

I think if you're struggling ... when you've got reports, exams, starting a new course, new unit ... you go, “hey, I need a hand” [and] there's definitely support there to help you. So there's no reason for you to fall in a heap ... the expected workload, it sometimes is pretty full-on, but you do ‘have the back’ of people. They will look after you. You're not left floundering.

This level of support from leadership was a key influencing factor on staff members' commitment to work. The staff members discussed the effect of supportive leadership:

I feel that if I've got a concern or if I want something done differently that I'm listened to, even if it's not ... the right way to go, then that's fine. There's always a good reason ... It makes me want to work harder, to be honest. It makes me want to go there every day and do the best that I can do.

The staff members' sense of being "listened to" could be an outcome of their involvement in a lot of school decision making. The focus groups noted that decision making processes change depending on the type of decision being made: "If it has to be made quickly, to do with the safety or wellbeing of people, then it's made from admin ... But then if it's got to do [with something else] - for example our mentor program ... [we had a committee]."

The discussion about supportive leadership in the focus groups brought the discussion full-circle to the concept of shared vision. There was a sense that College decisions may not always be fully supported by staff members, but that decisions were made based on the shared vision of the College and consensus between leadership and staff members ensured that decisions were applied with consistency within the College context.

Additional Scales from the SOHQ and Executive Team

The following two sections report on the findings from scales that were not included in the model developed for Mindarie Senior College, based on these data. While participative decision making did not fit within the model and had too few items to consider it a valid discrete construct, it did correlate positively with the scales that were included. Subsequently, the researchers felt it was important to report the findings of the decision making scale that were measured reliably within the sample. In addition, the Executive Team requested some additional items be added to the SOHQ, in relation to line management processes within the College. These additional items appeared to be measuring line management as a separate construct to the remainder of the leadership items, and therefore, the findings from the additional items are also reported within this section.

Participative Decision Making

The participative decision making scale included the following items:

1. I am happy with the decision making processes used in this College;
2. There is opportunity for staff to participate in College policy and decision making, and

3. Staff are frequently asked to participate in decisions concerning administrative policies and procedures in this College.

It is important to note the limitations of including a scale measured by three items. While the staff members' responses to the items may be of interest for their descriptive nature, three items are not enough to claim valid measurement of a complex construct such as staff members' perceptions decision making, particularly in this context of measuring College morale and school culture. Davis and Buskist (2008) also cite concerns that "too few items will leave the construct under evaluated and less understood" (p. 379), which limits claims of validity within the scale. Prior to reporting any of the findings on these items, a test for unidimensionality of the construct was conducted. The Tukey's test for nonadditivity was non-significant ($p = .50$), suggesting that there were no multiplicative effects occurring for the items within this scale.

Overall, the staff members responded positively to all three items, with 74% of aggregated scores corresponding to the 'agree' or 'strongly agree' categories. The staff members responded most positively to the item 'There is opportunity for staff to participate in College policy and decision making' ($M = 4.00$, $SD = 1.01$). Of the three participant groups, teachers were the only group to select the 'disagree' category in response to this item (18%). The College support staff members had the highest percentage of responses in the 'neither agree nor disagree' and 'unsure/I don't know' categories, each having 40% of College support staff members responses to the item. The remaining 20% of College support staff members selected 'agree' and 'strongly agree' as their responses.

The item with the next highest mean score was 'I am happy with the decision making processes used in this College' ($M = 3.76$, $SD = .85$). In total, 60% of staff members agreed with this statement and 14% strongly agreed to it. Of the remaining staff members, 14% selected 'neither agree nor disagree' and 12% disagreed with the statement. The majority of participants who disagreed with the statement were teaching staff members (over three quarters of the 12% who disagreed). However, the majority of teaching staff members as a group (61%) responded positively to the item 'I am happy with the decision making processes used in this College'.

The final item was 'Staff are frequently asked to participate in decisions concerning administrative policies and procedures in this College' ($M = 3.74$, $SD = 1.10$), whose mean score was very close (-0.02) to the item 'I am happy with the decision making processes used in this College'. The participant groups also responded similarly to this item, with teachers indicating the lowest responses to the item. Most of the College support staff members responded by either choosing 'neither agree nor disagree' (40% of their group overall) or by opting for the 'unsure/I don't know' category (20% of their group).

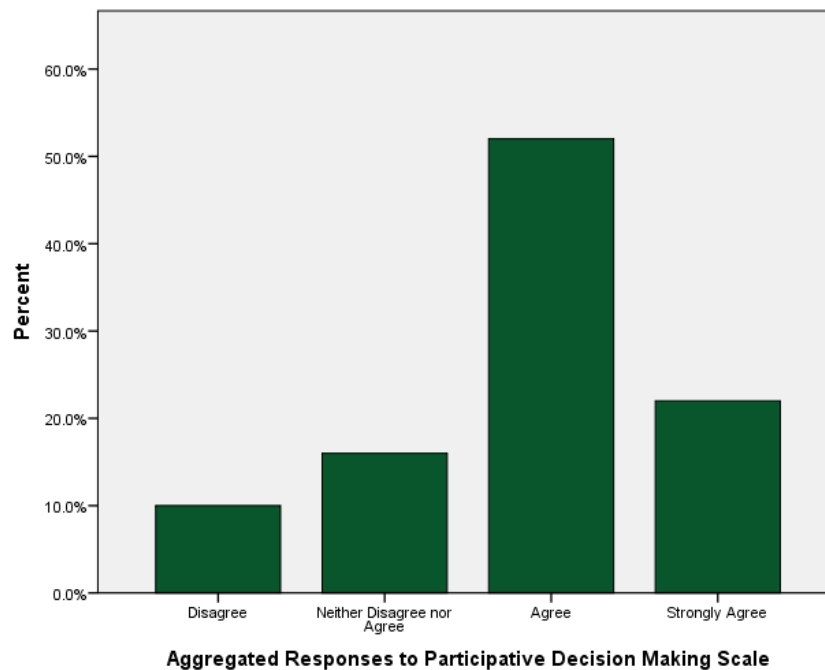


Figure 8. Staff members aggregated responses to the items in the Participative Decision Making scale of the SOHQ.

All of the focus groups stated that decision making processes were complex to discuss, as processes often changed depending on the nature of the decision being made. Also, the amount of consultation in any process was a personal preference, which added to the complexity of this scale. Ultimately, the focus group participants suggested that all decisions are made by the Principal and leadership team, where “the bottom line is our Principal ... things generally go through our leadership team and learning area managers will get staff members’ opinions either through the learning area meetings or the forum meeting.” The bottom line is necessary because:

We can't always get consensus. So if there isn't consensus, ultimately the buck stops with the leadership team. If we can't get consensus the decision is made by the principal and it's just well know that that's what we do. We will collaborate and try to get consensus.

The focus groups also emphasised that committees are used to ensure there is greater collaboration in making decisions:

We set up a committee with groups, good ideas group, which is a representative of all our teachers essentially. In its initial stage it was managed and run by a teacher as well, not in a leadership position, and they made collective decisions on behalf of the staff upon what direction we were going to go in and what our school stood for in regards to its culture.

It was evident that the inclusive processes organised by the College played a significant role in ensuring that all staff members felt they were included in making decisions, particularly those that affected them or the whole College. One example of this was the revision of the mentor program, which was “a whole-school approach to revising a particular program ... that crossed all the learning areas.”

Much of the discussion about decision making centred on staff members’ participation in the Wednesday forum. Again, it was mentioned that this forum did not include the part-time staff. Another concern from staff participants was that “[Some people] wouldn't speak up at forum. So in that environment, even though people think teachers are confident ... some people in that environment wouldn't like to address [issues] or complain that way.”

Line Management

The items added to the leadership scale included:

1. I receive support from my Line Manager at this College;
2. I am able to approach my Line Manager at this College to discuss any concerns I have, and
3. My Line Manager does not really know the professional problems faced by other staff in our College.

Similar to the participative decision making scale, the line management items cannot be considered a valid measurement scale in their own right. Interestingly, while these items were added to the supportive leadership scale, statistical analysis showed that these items measured concepts that differed from the other leadership items. However, these three items need to be considered as independent items (not combined as a scale), as they all measured slightly unique constructs and did not measure reliably as a single scale.

The aggregated responses to ‘I receive support from my Line Manager at this College’ showed that staff generally agreed with the item (88% agreement or strong agreement). Only 6% of staff members responded in the ‘disagree’ or ‘strongly disagree’ categories. Of all the participant groups, College support staff members responded the most positively to the statement. College support staff members only responded using the ‘agree’ and ‘strongly agree’ categories. Both teaching and leadership staff members had greater variance in their response categories.

Staff members were even more positive when responding to the item ‘I am able to approach my Line Manager at this College to discuss any concerns I have’, to which 46% of staff members agreed and a further 50% of staff members responded as strongly agreeing to the statement. Teaching staff members was the only participant group to respond in the ‘disagree’ category, with 2% of the total participants selecting this category of response.

As with the other negatively worded items, the validity and reliability for the item 'My Line Manger does *not* really know the professional problems faced by other staff in our College' was questioned by the researchers. However, the aggregated responses to this item showed that majority staff members felt their line manager did not understand their professional problems (62%), while 8% of staff members felt that their line manager did show this awareness. The remaining participants either selected the 'neither agree nor disagree' category (20%) or the 'unsure/I don't know' option (10%).

The focus group data showed that staff members were generally satisfied with their line management, and felt that their line managers "don't ever ask anything of us that they don't do themselves." However, line management around performance management was an area for improvement identified by the staff participants:

We have a performance management system and that's done ... some people do it better than other people. I've been performance managed by different people and definitely some staff take it more seriously than other staff.

Despite the perceived variability of some performance management, the focus group participants felt that the shared vision of the College is also applied across staff members' performance:

If staff members aren't adhering to the way things have to be done then those staff members are dealt with individually which is the philosophy that our founding principal has set up for students ... we're treated as professionals and there's an expectation that comes with that that you will adhere to all of these things. When staff don't then as the line manager or somebody will intervene on just that one individual.

This level of consistency in the College's philosophy was seen as very positive by the staff members and added to the high morale driving a positive school culture.

Teaching Efficacy Belief Instrument

The Teaching Efficacy Belief Instrument, amended from the Science Teaching Belief Instrument (Riggs & Enochs, 1989), measured teachers' efficacy against two scales:

1. Outcome expectancy: Efficacy linked to positive student learning outcomes, and
2. Teaching efficacy: Personal efficacy about teaching in their main subject area.

The data from each of the two scales were tested for normality and reliability. Both scales showed some deviance from a normal distribution; however, the teaching efficacy scale had a greater deviation, with the distribution being negatively skewed ($Z_{skew} = -9.971$, $p < .001$).

Both scales also showed negative kurtosis, suggesting the flatness of the distribution of scores. The non-normal distribution of these scores was anticipated due to the unique school context; including the high proportion of Level 3 and senior teacher classroom teachers, as well as the average < 10 year teaching experience level across all curriculum learning areas (Mindarie Senior College Annual Report 2014). The negative skew and kurtosis suggests that the responses of the teachers were clustered around the positive categories ('agree' and 'strongly agree' in the Teaching Efficacy survey).

In addition to normality, the two scales were tested for reliability. Previous research on the Science Teaching Belief Efficacy Instrument has reported that outcome expectancy scale is generally less reliable due to the highly personal responses to student learning and teaching philosophies (Bleicher, 2004; Enochs & Riggs, 1990; Enochs et al., 2000). The Cronbach's alpha coefficient was used to determine internal consistency reliability for the instrument. Both the teaching efficacy and outcome expectancy scales returned reliable results when each scale included eight items (outlined in the subsequent sections of this report). The Cronbach's alpha for the teaching efficacy scale was .839 and for the outcome expectancy $\alpha = .855$.

As with the SOHQ, any negatively worded items (e.g., I generally teach my subject area ineffectively) were reverse coded so that a higher level score (i.e., an 'agree' or 'strongly agree' category) corresponded with higher efficacy.

It is important to note that feedback from the participants was that the questionnaire felt very negative. This is due to the test design, whereby the negative phrasing is used to reduce response bias or the chance that a participant will select one category of response without carefully reading the item statement for its meaning (Cohen, Manion, & Morrison, 2011).

Outcome Expectancy Scale

The outcome expectancy scale included eight items:

1. When a student does better than usual in my class, it is often because I exerted a little extra effort;
2. If students are underachieving in my class, it is most likely due to ineffective teaching;
3. The low achievement of a student can be overcome by good teaching;
4. The low achievement standard of some students cannot generally be blamed on their teachers;
5. When a low achieving student progresses in a subject, it is usually due to extra attention given by the teacher;
6. The teacher is generally responsible for the achievement of their students;
7. Effectiveness in teaching has little influence on the achievement of students with low motivation, and

8. Even teachers with good content knowledge cannot help some student to learn in their subject area.

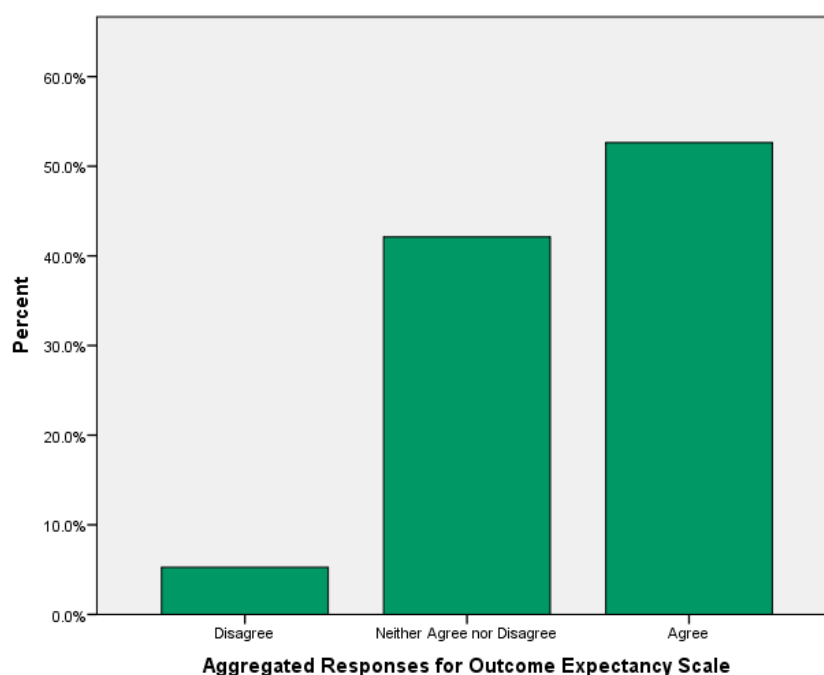


Figure 11. Staff members aggregated responses to the items in the Outcome Expectancy scale of the Teaching Efficacy Belief Instrument.

The median score for the outcome expectancy scale was 'agree'. A small percentage of teachers (5.3%) had lower outcome expectancy, shown by their aggregated scores reflecting a 'disagree' selection across most item statements. The majority of teachers (52.6%) selected 'agree', indicating that they feel able to effect positive change on students' outcomes through their teaching. The remaining teacher participants selected the 'neither agree nor disagree' category (42.1%). One explanation for the percentage of teachers selecting 'neither agree nor disagree' could be their perception of the multitude of factors that affect students' learning outcomes (e.g., family home environment, pastoral care and socio-emotional factors, which were discussed in the focus groups). It could also be linked to the College's young adult ethos where the students are encouraged to be more active in their education; subsequently, outcome expectancy is shared between teachers and students, as opposed to being considered only by the teacher. This explanation was supported by the focus group participants, who reiterated that "from the very first interview ... everything's directed at the student ... They've got to take responsibility." An alternative explanation is the high-stakes nature of the senior school courses, which could impact on student outcomes. The staff members noted that "there's a lot of stress and pressure to be up to date, to get your work done, to achieve and to get the results ..." The pressure of the environment could also have an impact on students' outcomes, and on teachers feeling that they have definite control over ensuring that students reach these outcomes.

Teaching Efficacy Scale

The teaching efficacy scale included eight items (in their original form):

1. Even if I try very hard, I do not teach my subject as well as other teachers;
2. I know the steps necessary to teach my subject content effectively;
3. I generally teach my subject area ineffectively;
4. I understand my subject area content knowledge well enough to be effective in teaching it;
5. I find it difficult to explain to students how concepts in my subject area work;
6. I wonder if I have the necessary skills to teach my subject area;
7. When a student has difficulty understanding a concept, I am usually at a loss as to how to help them, and
8. I do not know what to do to motivate students in my subject area.

The figure overleaf shows the teachers' responses to the teaching efficacy scale, once all of the negatively worded items were reverse coded. The reverse coding was undertaken so that a higher numerical score corresponded with higher teaching efficacy. Consequently, the graph below shows the results for the positively worded items of:

1. If I try very hard, I teach my subject as well as other teachers;
2. I know the steps necessary to teach my subject content effectively;
3. I generally teach my subject area effectively;
4. I understand my subject area content knowledge well enough to be effective in teaching it;
5. I find it easy to explain to students how concepts in my subject area work;
6. I know I have the necessary skills to teach my subject area;
7. When a student has difficulty understanding a concept, I can usually suggest something to help them, and
8. I know what to do to motivate students in my subject area.

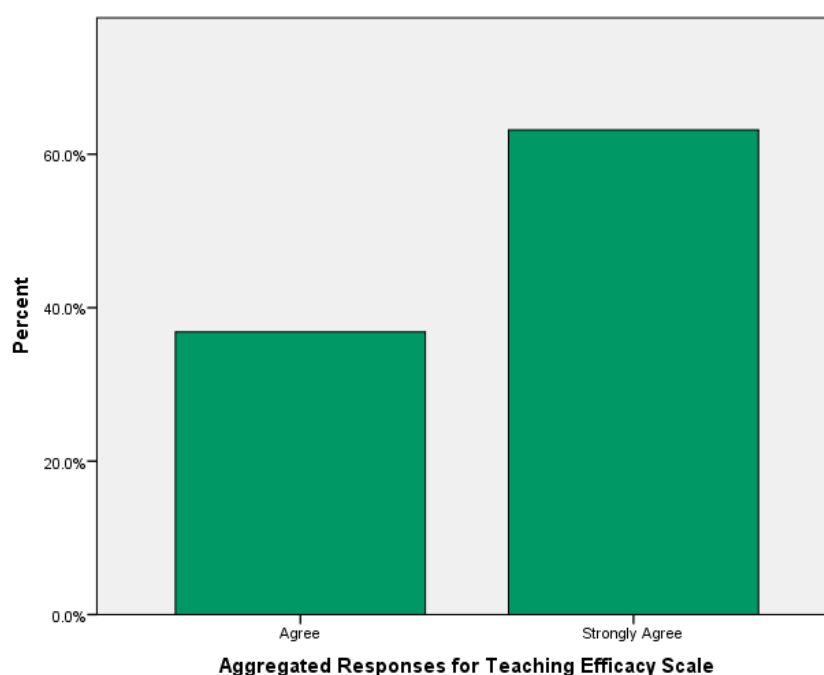


Figure 12. Staff members aggregated responses to the items in the Teaching Efficacy scale of the Teaching Efficacy Belief Instrument.

In considering the teaching efficacy scale, most teachers had very high self-efficacy in their abilities as teachers (63.2% 'strongly agree'). The remaining teachers still showed positive self-efficacy (36.8%), corresponding with the 'agree' category. The extensive experience and professional accolades of the teaching staff members are most likely positive evidence of their success as a teaching staff members, and it is anticipated that this is reflected in the results of this scale.

The high self-efficacy of teachers was reported across the focus groups. Part of the self-efficacy could be attributed to merit selection employment processes; however, focus group participants also alluded to the potential risks of this process:

Our staff have been merit selected ... They expect a lot of themselves and occasionally we need to make a concerted effort to work with specific staff to look after their own wellbeing, because they just keep pushing and pushing.

The high-achieving staff culture could also lead to alternative risks to well-being, such as "the pressures of a workload ... Many staff feel that when they first get there, I think a bit overwhelmed with the level of everyone's involvement and how much they're striving to achieve." However, the issue of well-being was monitored by the College leadership.

Conclusions and Recommendations

Overall, analysis of the School Organisational Health Questionnaire (Hart et al., 2000) suggested that the Mindarie Senior College participants contribute to a positive and professionally rewarding school culture. Although the quantitative analysis only reflects 55% of the whole-College population, the Phase One results suggested that the College's shared vision was a key driver of staff morale. The young adult ethos was frequently mentioned in focus group discussions, and this ethos provided consistency among the staff members' College experiences in working towards a collective goal. The College's leadership team were seen as role models for the direction of the Senior College by their staff members, further supporting the sense of collegiality and shared vision across the whole College.

While the quantitative data were generally very positive, the focus groups raised some key areas for improvement, specifically:

1. Greater inclusion of part-time staff (linked to appraisal and recognition, and participative decision making);
2. Greater opportunities for staff members to interact outside of their subject departments (collegiality);
3. Greater opportunities for professional learning on the new senior school courses, including interaction with the Western Australian School Curriculum and Standards Authority (professional growth), and
4. Consistency of line management processes across the College, specifically around appraisal (linked to appraisal and recognition).

The path diagram from the confirmatory factor analysis suggested appraisal and recognition could be a key catalyst for school culture, as it was highly significantly correlated with three other scales: supportive leadership, professional growth, and collegiality.

Subsequently, we make the following recommendations:

1. There is support for the development of strategies that would support the inclusion of part-time staff members in collegial activities: for example, inclusion in the forum or a similar event.
2. There is support for greater interaction between staff members in subject departments: for example, through a common staff room or social activities.
3. There could be more opportunities for line manager development, including appraisal practices and as facilitators of professional learning opportunities for the new senior school curriculum within their subject areas.

It should be noted that these conclusions and recommendations represent the beginning of this project. These recommendations form the basis of Phase Two of the research project, to enhance school culture based on consultation and collaboration with the College's leadership team.

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Appendix A: Glossary of Statistical Terms and Symbols

Term/Symbol	Definition
Cronbach's alpha coefficient (α)	A measure of the internal consistency of a measurement scale (Cronbach, 1951). This coefficient tells the researcher how closely the items (statements) in the scale are related.
Comparative Fit Index (CFI)	A measure of the goodness-of-fit of a model based on the known population parameters (Bentler, 1990). The CFI is designed to take small samples into consideration when fitting the structural model (Bentler, 1990). The closer the value is to 1, the better the fit of the proposed model (Hu & Bentler, 1999).
Delta (d)	The variance of each factor in the model, that is, the random error parameter for the measurement (Rungie, Coote, & Louviere, 2011).
Kurtosis ($Z_{kurtosis}$)	A measure of the degree to which scores cluster at the tails of a normal (bell curve) distribution model. A positive kurtosis has many scores in the tails, while a negative kurtosis has too few to show a normal distribution (DeCarlo, 1997).
Normed chi square distribution (χ^2/df)	A measurement of fit where the chi-square (goodness-of-fit measurement) is divided by the degrees of freedom in the model. Scores between 1 and 3 indicate a good fit (Sun, 2005).
Number (n)	The number of participants in a sample.
Regression weight	The estimated correlation between two variables in the model, showing the dependence relationship in the structural model created (Gefen, Straub, & Boudreau, 2000).
Root Mean Square Error of Approximation (RMSEA)	A measure of the 'badness'-of-fit of a model, through estimating the error of the proposed model. A RMSEA score of less than 0.08 indicates a good model fit (Browne & Cudeck, 1993). RMSEA is a less preferable measurement with a small sample size (Hu & Bentler, 1998).
Skew (Z_{skew})	A measure of the symmetry of distribution of a sample, where a large positive score indicates more scores toward the lower end of the tail, and a large negative score indicates more scores toward the higher end of the distribution (Arellano-Valle, del Pino, & San Martin, 2002).

Term/Symbol	Definition
Significance level (p)	A measurement of change between the actual sample and the hypothesis model, resulting in the determination that the factors measured are causing an effect on the sample. A p value closer to 0 indicates a statistically strong relationship.
Tucker-Lewis Coefficient (TLI)	A measurement of the goodness-of-fit for a proposed model, where the proposed model is measured against a baseline model that assumes the variables are uncorrelated (Sugawara & MacCallum, 1993). The closer the value is to 1, the better the fit of the proposed model (Hu & Bentler, 1999).
Z scores	A standardised score as expressed by its standard deviation, so that the new scores create a normal (bell curve) distribution with a mean of 1 and a standard deviation of 0.